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Article

When newcomer influx becomes a retention risk: the moderating role of entry-level benefits

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Abstract: Early newcomer turnover is a persistent challenge for organizations, yet little is known about whether the scale of newcomer entry itself is associated with newcomer retention. Drawing on research on human capital flows and newcomer retention, we examine newcomer influx, defined as the number of newcomers entering an organization relative to its regular workforce, and test whether entry-level benefits condition its association with early turnover. Using five waves of Human Capital Corporate Panel II data from South Korea, we analyze 2,039 firm-year observations from 510 firms. Firm and year fixed-effects models show that within-firm increases in newcomer influx are associated with higher same-year newcomer turnover. This association is weaker when entry-level benefits are more favorable than the firm's typical level. Count-based and other sensitivity analyses provide additional, although specification-sensitive, evidence for this pattern. The findings are interpreted as contemporaneous within-firm associations rather than causal effects.

Keywords: early turnover; human capital flows; employee retention; organizational inducements; workforce dynamics

1. Introduction

Employee turnover has been a central topic in organizational research for decades, with scholars seeking to explain both why employees leave and what binds them to organizations (Holtom et al., 2008; Mitchell et al., 2001; Mobley, 1977). Within this broader tradition, early newcomer turnover has received particular attention because organizational entry represents a vulnerable period in which employees must learn unfamiliar roles, establish relationships, and determine whether continued membership is desirable (Bauer et al., 2007, 2025; Kammeyer-Mueller & Wanberg, 2003; van der Baan et al., 2025). Prior research has shown that newcomer retention depends substantially on successful socialization, adjustment, fit, and organizational support (Allen, 2006; Bauer et al., 2007). Research also suggests that organizational HR practices and inducements can promote retention, including compensation and employee benefits (Dale-Olsen, 2006; Huselid, 1995; Lee et al., 2006; Shaw et al., 2009). At the same time, organization-level research increasingly suggests that broader workforce dynamics, including hiring and workforce expansion, can shape employee experiences and organizational functioning (Bort et al., 2025; Hausknecht et al., 2009; Reilly et al., 2014; Wang & Zatzick, 2019). Together, these streams suggest that understanding newcomer turnover requires attention not only to newcomers themselves but also to the organizational conditions under which they enter and the resources organizations provide to retain them.

Despite these advances, relatively little is known about whether the scale of newcomer entry itself matters for the retention of the newcomers who constitute that inflow. Organizations differ substantially in how many newcomers they

bring in relative to their existing workforce, and even the same organization may experience periods of unusually high newcomer entry. Human-capital-flow research has demonstrated that the magnitude and temporal pattern of hiring can influence organizational processes and outcomes by changing the flow of human capital and the interaction demands between newcomers and incumbents (Reilly et al., 2014; Wang & Zatzick, 2019). Yet this literature has focused primarily on what employee inflows mean for organizational functioning or performance rather than what they mean for the retention of the newcomers themselves. This omission matters because substantial newcomer entry may increase the simultaneous demands associated with placing, training, socializing, and integrating new employees. Equally important, less is known about the organizational conditions under which the association between elevated newcomer entry and early turnover may be weaker. Although organizational inducements, including compensation and benefits, have long been associated with lower turnover (Dale-Olsen, 2006; Huselid, 1995; Lee et al., 2006; Shaw et al., 2009), it remains unclear whether entry-level benefits are especially relevant during periods of relatively large newcomer inflows.

Building on research on organizational hiring and human capital acquisition, we focus on newcomer influx—the number of newcomers entering an organization during a given period relative to the size of its regular workforce. This measure is closely related to prior hiring-rate research rather than a wholly distinct form of workforce movement; our contribution lies in shifting the outcome of interest toward retention among the newcomers who constitute those inflows. We examine whether greater newcomer influx is associated with higher early newcomer turnover and whether entry-level benefits attenuate this relationship. We test these arguments using five waves of firm-level data from the Korean Human Capital Corporate Panel II (HCCP II), with hiring and separation reference years of 2019, 2020, 2021, 2022, and 2024. Using firm and year fixed effects, we examine whether within-firm increases in newcomer influx are associated with higher same-year newcomer turnover and whether this association weakens when entry-level benefits are simultaneously higher than the firm's typical level. In doing so, this study connects research on human capital flows with newcomer retention while distinguishing gross newcomer entry from net employment growth and acknowledging that the available data do not directly distinguish expansion from replacement hiring.

2. Literature review

2.1. Collective turnover and human capital flows

Turnover research historically developed around individual withdrawal decisions and their attitudinal antecedents (Holtom et al., 2008; Mobley, 1977). A major development in this literature was the shift from asking only why employees leave toward also understanding why they stay. The job embeddedness perspective, for example, proposed that employees remain because of the links they develop, their perceived fit, and the sacrifices associated with leaving, and demonstrated predictive validity beyond traditional turnover antecedents such as job satisfaction and organizational commitment (Lee et al., 2004; Mitchell et al., 2001).

Over time, scholars also shifted attention from individual departures to collective turnover, recognizing that employee exits constitute an aggregate organizational phenomenon with consequences beyond individual withdrawal decisions (Hausknecht, 2017; Hausknecht & Trevor, 2011). Meta-analytic evidence indicates that higher collective turnover is generally associated with poorer unit and organizational performance (Hancock et al., 2013; Park & Shaw, 2013).

The development of context-emergent turnover (CET) theory further advanced this organizational-level perspective by conceptualizing collective turnover in terms of the quantity and quality of human capital resources depleted from a unit (Nyberg & Ployhart, 2013). This perspective emphasizes that workforce movement is dynamic: the consequences of departures depend not only on how many employees leave but also on the human capital lost, how turnover unfolds over time, and how departing employees are subsequently replaced. Consistent with this view, Call et al. (2015) demonstrated that turnover levels, changes, temporal dispersion, and the quantity and quality of replacement hires jointly shape unit performance.

This dynamic view encouraged scholars to consider employee inflows alongside employee exits. Reilly et al. (2014) explicitly conceptualized turnover, hiring, and transfers as interconnected human capital flows, emphasizing that organizational human capital changes through both depletion and acquisition. Their work demonstrates that employee entry is not merely an administrative response to vacancies but a meaningful component of organizational workforce dynamics. Wang and Zatzick (2019) developed this acquisition perspective more directly by examining how the magnitude and temporal pattern of hiring influence organizational innovation. Their argument emphasized that newcomers bring new knowledge and ideas but also require collaboration and integration with incumbents. Accordingly, hiring rate, changes in hiring rate, and the temporal dispersion of hiring can influence organizational outcomes by altering both the amount of new human capital entering the organization and the integration demands associated with that entry.

Related studies reinforce the importance of the organizational context surrounding entry. Hausknecht et al. (2009) showed that newcomer concentration within work units conditions the performance consequences of collective turnover. Research on firm growth has similarly examined the organizational challenges associated with rapid workforce expansion. Drawing on Penrosean growth theory, Bort et al. (2025) found evidence consistent with the notion that rapid employment growth can generate socio-structural challenges and poorer employee experiences when expansion strains organizational capacity. Labor-economics research likewise shows that gross employee flows can differ substantially from net employment change because firms often hire and lose employees simultaneously (Burgess et al., 2000, 2001).

Among these perspectives, research on hiring rates and human capital acquisition provides the closest foundation for the present study. We therefore do not claim that newcomer influx represents an entirely distinct form of workforce movement. Rather, we use the term to focus specifically on the relative volume of newcomers entering an organization and shift the outcome of interest from organizational innovation or performance toward the subsequent retention of the newcomers who constitute those inflows.

2.2. Newcomer turnover and retention

Organizational socialization has a long research tradition examining how newcomers learn organizational roles, acquire information, and become integrated into the workplace (Jones, 1986; Morrison, 1993; Van Maanen & Schein, 1979). Early work established that organizations differ in how they socialize newcomers and that different socialization tactics shape newcomer adjustment (Jones, 1986; Van Maanen & Schein, 1979). Other research highlighted the proactive role of newcomers themselves, demonstrating that information-seeking behavior influences newcomer satisfaction, performance, and intentions to leave (Morrison, 1993). Subsequent longitudinal research further clarified how individual and organizational antecedents operate through adjustment processes

during organizational entry (Kammeyer-Mueller & Wanberg, 2003).

Meta-analytic evidence consolidated these findings. Bauer et al. (2007) showed that role clarity, self-efficacy, and social acceptance connect newcomer socialization experiences with outcomes including job satisfaction, organizational commitment, intentions to remain, and turnover. Saks et al. (2007) similarly found systematic relationships between institutionalized socialization tactics and favorable newcomer adjustment. More recent reviews and meta-analytic evidence continue to position organizational socialization and adjustment as central to newcomer retention (Bauer et al., 2025; van der Baan et al., 2025).

Organizations can therefore actively shape newcomers' attachment to the workplace. Allen (2006), for example, found that organizational socialization tactics were associated with greater on-the-job embeddedness and that newcomer embeddedness was negatively associated with subsequent turnover. This line of research builds on the broader job embeddedness perspective, which emphasizes links, fit, and sacrifice as forces that keep employees in organizations (Lee et al., 2004; Mitchell et al., 2001). Allen and Shanock (2013) further demonstrated that perceived organizational support and embeddedness help connect socialization tactics with commitment and voluntary turnover among new employees.

Newcomer retention is also socially embedded. Relationships with incumbents and other newcomers can shape access to information, assistance, and social support during entry. Research on newcomer cohort networks has shown that newcomers' network positions influence the task assistance they receive and their subsequent turnover (Zhou et al., 2022). More broadly, turnover-contagion research shows that coworkers' job-search behavior and embeddedness can influence employees' own decisions to quit (Felps et al., 2009).

A related stream of research emphasizes organizational inducements. Strategic HRM research has long shown that organizational HR systems can shape employee turnover at the firm level (Huselid, 1995). Exchange-oriented research similarly indicates that HR inducements and investments can reduce quit rates (Shaw et al., 2009). More specifically, compensation and nonwage benefits represent direct sources of value attached to organizational membership. Dale-Olsen (2006) found that higher wages and greater fringe benefits were associated with lower worker turnover, while Lee et al. (2006) showed that benefit plans were systematically associated with firm-level turnover. Evidence from Korean firms also indicates that compensation- and benefits-related organizational characteristics are associated with early turnover among newly hired workers (Min et al., 2023).

Taken together, however, the human-capital-flow and newcomer-retention literatures leave an important intersection underexplored. Human-capital-flow research demonstrates that the magnitude and timing of employee entry matter for organizational outcomes, whereas newcomer research demonstrates that adjustment experiences and organizational inducements matter for retention. Much less attention has been directed toward whether the relative magnitude of newcomer entry itself represents a retention-relevant organizational context, or whether retention-oriented inducements become particularly consequential under conditions of elevated newcomer entry.

2.3. Hypothesis development

2.3.1. Newcomer influx and early newcomer turnover

Newcomer entry creates organizational demands that extend beyond the administrative act of hiring. New employees must learn task requirements, organizational routines, and behavioral expectations; acquire information and feedback; establish relationships with supervisors and coworkers; and become integrated into existing social and task systems (Kammeyer-Mueller & Wanberg,

2003; Morrison, 1993; Van Maanen & Schein, 1979). Decades of socialization research show that the success of these processes has important implications for newcomer adjustment and retention (Bauer et al., 2007; Jones, 1986; Saks et al., 2007).

These demands should become more consequential as the volume of newcomers entering an organization increases relative to the workforce available to absorb them. This reasoning is consistent with a central insight from Penrosean growth theory: organizations cannot expand productive activity without limit because managerial resources and organizational capacities require time to develop and deploy (Penrose, 1959). Recent research applying this logic to employment growth similarly suggests that rapid workforce expansion can generate managerial and socio-structural challenges when the pace of growth exceeds an organization's capacity to accommodate it (Bort et al., 2025).

Human-capital-flow research provides complementary reasoning. Newcomers add potentially valuable knowledge and capabilities, but realizing that value requires interaction and integration with the existing workforce (Reilly et al., 2014; Wang & Zatzick, 2019). Increasing newcomer entry relative to the incumbent workforce therefore simultaneously increases the number of individuals requiring organizational and social integration. The relative, rather than merely absolute, scale of entry is important. Hiring 20 newcomers into a workforce of 100 represents a substantially different organizational event from hiring 20 newcomers into a workforce of 2,000. The incumbent workforce constitutes part of the organizational base through which supervision, information, social relationships, routines, and integration occur. We therefore conceptualize high newcomer influx as a condition in which newcomer-absorption demands are elevated relative to the organization's existing workforce base.

We do not assume that high influx necessarily reduces any specific resource, such as supervisory attention or formal training, because these mechanisms are not directly measured in the present study. Rather, the argument is that the organizational demands associated with newcomer accommodation increase relative to the base through which those newcomers must be integrated. Under these conditions, consistently providing the organizational and social conditions conducive to successful adjustment may become more difficult, increasing the likelihood of early departure.

H1. *Newcomer influx is positively associated with early newcomer turnover.*

2.3.2. Moderating role of entry-level benefits

Although newcomer influx may create a more demanding retention context, organizations can provide inducements that increase the value employees derive from continued membership. Organizational inducements have long been linked to employee retention, whether through broader HR systems (Huselid, 1995), exchange-oriented HR practices (Shaw et al., 2009), or specific economic and nonwage benefits (Dale-Olsen, 2006; Lee et al., 2006). In the present study, we focus on entry-level benefits as a newcomer-directed organizational inducement.

The retention value of such inducements may be especially relevant during organizational entry. Newcomers have had relatively little time to accumulate many of the links that bind longer-tenured employees to their organizations. Their relationships with coworkers and supervisors are still developing, their fit perceptions remain under formation, and many of the sacrifices associated with leaving have yet to accumulate. The job embeddedness literature suggests that links, fit, and perceived sacrifice are important determinants of staying (Lee et al., 2004; Mitchell et al., 2001), while newcomer research shows that the formation of embeddedness during organizational entry predicts subsequent turnover (Allen, 2006; Allen & Shanock, 2013). Benefits for employees represent

a complementary source of organizational value. They do not necessarily solve the socialization or integration demands associated with large newcomer inflows, nor do we assume that they substitute for supervisory attention, coworker support, or onboarding. Instead, benefits for employees provide additional value associated with continued organizational membership and increase what employees potentially give up by leaving.

We propose that this retention value becomes particularly consequential when newcomer influx is elevated. During periods of unusually high newcomer entry, the organization is simultaneously accommodating more newcomers relative to its existing workforce. If such periods create a more demanding context for adjustment and retention, favorable entry-level benefits can provide an additional organizational inducement to remain. Importantly, our argument concerns a within-firm contingency, not merely a stable difference between generous and less generous employers. We expect that when a firm experiences newcomer influx above its own typical level, the positive association between influx and early turnover will be weaker when the entry-level benefits offered to newcomers are simultaneously more favorable than that firm's usual level.

H2. *The positive association between newcomer influx and early newcomer turnover is weaker when entry-level benefits are higher; specifically, within-firm increases in newcomer influx will be less strongly associated with early newcomer turnover when entry-level benefits are simultaneously higher than the firm's typical level.*

3. Materials and methods

3.1. Data and sample

We used data from the Human Capital Corporate Panel II (HCCP II), a longitudinal firm-level survey of Korean organizations. HCCP II repeatedly collects information on workforce composition, recruitment and separation, compensation and benefits, training and development, and other human resource management practices. The firm-year served as the unit of analysis. The five survey waves used here were conducted in 2020, 2021, 2022, 2023, and 2025 and report hiring and separation for reference years 2019, 2020, 2021, 2022, and 2024, respectively; the available files therefore do not provide a 2023 reference-year observation. The pooled raw data contained 2,460 firm-year observations from 673 firms. Restricting the sample to organizations with at least 100 regular employees yielded 2,378 observations from 661 firms. Retaining firm-years with at least one newcomer hire yielded 2,196 observations from 647 firms. Complete-case screening for variables required in the main analyses yielded 2,163 observations from 634 firms. Finally, firms were required to contribute at least two usable observations because firm fixed-effects estimation relies on within-firm variation, resulting in a common analytic sample of 2,039 firm-year observations from 510 firms. Regular employment was calculated as the sum of male and female regular employees. The size restriction reflects our focus on newcomer entry relative to an established workforce and also reduces instability in ratio-based measures among very small firms.

3.2. Variable measurement

3.2.1. Early newcomer turnover

The dependent variable, early newcomer turnover, was measured as the percentage of newcomers hired during a given year who left the organization within that same calendar year. Specifically, we divided the number of newcomers who left during the reference year by the total number of newcomers hired during that year and multiplied the resulting ratio by 100. Higher values therefore indicate that a larger proportion of the year's newcomer cohort left before the end of the same calendar year. The HCCP II does not provide individual hiring and

departure dates, so employees hired earlier in a year have a longer opportunity to be observed leaving than those hired later in the year. Accordingly, this measure should be interpreted as same-calendar-year newcomer turnover rather than a standardized post-entry turnover rate over a common follow-up window. In the final sample, the mean early newcomer turnover rate was 26.77% (SD = 25.38).

3.2.2. Newcomer influx

Our principal independent variable, newcomer influx, was measured as the number of newcomers hired during the reference year relative to the size of the firm's regular workforce. Specifically, we divided the number of newcomer hires by the number of regular employees and multiplied the ratio by 100. Thus, a newcomer influx value of 10 indicates that the number of newcomers hired during the year corresponds to 10% of the firm's regular workforce. The mean newcomer influx in the final sample was 10.18% (SD = 11.81).

3.2.3. Entry-level benefits

Entry-level benefits were measured using the HCCP II item translated as: "Please indicate the level of employee welfare benefits at each employee rank in your company (for manufacturing firms: office and administrative employees)". We used the response for "first-year staff employee". The five response options compare the firm with the average in the same industry. The benefits item is asked with reference to the same designated year as the hiring and newcomer departure items in each HCCP II wave (2019, 2020, 2021, 2022, and 2024, respectively). Accordingly, the benefits rating, newcomer hiring, and newcomer departures are aligned to the same reference year in the firm-year analysis. This common reference year does not, however, establish the within-year temporal ordering of benefits, hiring, and departures. For manufacturing firms, the benefits rating concerns office/administrative employees, whereas the newcomer hiring and departure counts cover the firm's broader workforce; the measures may thus differ in employee coverage. The five ordered response categories were 1 (much lower than the industry average), 2 (slightly lower), 3 (at the industry average), 4 (slightly higher), and 5 (much higher). The observed frequencies were 185, 419, 1,113, 286, and 36, respectively. Thus, the measure captures industry-relative benefit conditions rather than absolute benefit expenditure. A change in this rating may reflect changes in the industry benchmark or in the firm's relative position, and need not indicate any change in the absolute amount or quality of benefits provided. The focal model represents these ordered scores numerically to estimate a parsimonious within-firm linear trend after firm-mean centering; this treatment does not imply that the distances between adjacent categories are known to be exactly equal. In the analytic sample, the within-firm standard deviation of the measure was 0.462, and 279 of 510 firms (54.7%) changed their benefits rating at least once. We therefore also examined categorical specifications that do not impose equal spacing as sensitivity analyses. Newcomer influx also varied within 509 of 510 firms, and the median firm-specific within-firm standard deviation of influx was approximately 3.42 percentage points. Among the 279 firms whose benefits rating changed, 118 changed it at least twice; these changing firms contributed 1,178 firm-year observations (57.8% of the analytic sample). Thus, the within-firm variation required to identify the interaction is not confined to a very small number of firms, although these descriptive checks do not rule out the possibility of influential firms or observations.

3.2.4. Control variables

We included four time-varying control variables selected for their theoretical proximity to newcomer hiring or retention. Firm size was measured as the number of regular employees and natural-log transformed. Newcomer salary captured the annual gross salary of first-year employees, expressed in millions of

Korean won. Newcomer on-the-job training (OJT) was coded 1 when the firm provided on-the-job training to newcomers and 0 otherwise. Training investment per employee was calculated by dividing the firm's total education and training expenditure by the number of regular employees and then applying a logarithmic transformation to reduce skewness.

3.3. Analysis strategy

We estimated firm fixed-effects models with year fixed effects to examine the relationships among newcomer influx, entry-level benefits, and early newcomer turnover. Firm fixed effects control for observed and unobserved characteristics that remain constant within a firm over time; the coefficients therefore reflect within-firm changes rather than stable differences between firms. Year fixed effects account for common temporal shocks, but they do not eliminate firm- or industry-specific responses to events such as the COVID-19 pandemic. Standard errors were clustered at the firm level to account for heteroskedasticity and serial correlation within firms over time. Missing observations on variables required for a specification were handled by complete-case analysis. Because the dependent variable is bounded between 0 and 100 and the two focal ratios share newcomer hires in their construction, we also estimated departure-count Poisson Pseudo-Maximum Likelihood (PPML) models using the logarithm of newcomer hires as an offset. Additional sensitivity analyses examined small newcomer cohorts, categorical coding of entry-level benefits, and selected time-varying confounders. All analyses were conducted using Stata 17.0. Within-transformed variance inflation factors were low (1.024-1.031 for the focal predictors; maximum $= 1.883$), providing no indication of problematic multicollinearity.

To test Hypothesis 1, we regressed early newcomer turnover on newcomer influx while controlling for firm size, newcomer salary, newcomer OJT, and training investment per employee. Under the fixed-effects specification, the coefficient on newcomer influx indicates whether a firm experiences higher early newcomer turnover in years when its newcomer influx is higher than in its other observed years.

To test Hypothesis 2, which concerns a specifically within-firm moderating process, we transformed newcomer influx and entry-level benefits into within-firm deviation scores. For each firm, we first calculated its average newcomer influx and average entry-level benefits across the observed years. We then subtracted these firm-specific averages from each yearly observation. Positive values therefore indicate that newcomer influx or entry-level benefits was higher than the firm's own typical level in that year, whereas negative values indicate that it was lower than usual.

The interaction term was constructed by multiplying the within-firm deviation in newcomer influx by the within-firm deviation in entry-level benefits. This approach allows the moderation test to address whether the association between an unusually high level of newcomer influx for a given firm and early newcomer turnover depends on whether entry-level benefits are simultaneously more or less favorable than that firm's usual level. For interpretation of a significant interaction, we conducted simple-slope analyses at three levels of within-firm entry-level benefits: one standard deviation below the firm-specific mean, at the firm-specific mean, and one standard deviation above the firm-specific mean. These analyses were used to assess how the relationship between newcomer influx and early newcomer turnover changes depending on whether entry-level benefits are relatively low, typical, or high for the same firm.

4. Results

4.1. Descriptive statistics and correlations

Table 1 reports descriptive statistics and pooled bivariate correlations for

the common analytic sample. Mean early newcomer turnover was 26.77%, while mean newcomer influx was 10.18% of regular employment. Newcomer influx was positively correlated with early newcomer turnover ($r = 0.293$, $p < 0.001$). Entry-level benefits were negatively correlated with turnover ($r = -0.096$, $p < 0.001$), as was newcomer salary ($r = -0.180$, $p < 0.001$). These pooled correlations combine between-firm and within-firm variation and should therefore not be interpreted as the correlations underlying the fixed-effects estimates, which rely on within-firm variation.

Table 1. Descriptive statistics and correlations

Variables	M	SD	1	2	3	4	5	6	7
1. Early newcomer turnover	26.769	25.382	1.000						
2. Newcomer influx	10.176	11.808	0.293***	1.000					
3. Entry-level benefits	2.789	0.857	-0.096***	-0.101***	1.000				
4. Firm size (ln)	5.622	0.794	-0.076***	-0.099***	0.218***	1.000			
5. Newcomer salary	34.906	7.202	-0.180***	-0.189***	0.319***	0.441***	1.000		
6. Newcomer OJT	0.820	0.385	-0.046*	-0.011	0.086***	0.084***	0.094***	1.000	
7. Training investment per employee (ln)	0.191	0.273	-0.108***	-0.129***	0.188***	0.236***	0.232***	0.087***	1.000

*Note: N = 2,039 firm-year observations. Newcomer salary is measured in million KRW. *p < 0.05. **p < 0.01. ***p < 0.001.*

4.2. Hypothesis tests

Table 2 presents the results of the firm fixed-effects analyses. Model 1 includes the control variables, Model 2 adds newcomer influx to test Hypothesis 1, and Model 3 introduces entry-level benefits and the within-firm interaction to test Hypothesis 2.

As shown in Model 2 of **Table 2**, newcomer influx was positively and significantly associated with early newcomer turnover ($b = 0.273$, $SE = 0.107$, $p = 0.011$). Thus, within the same firm, a one-percentage-point increase in newcomer hires relative to the regular workforce was associated with approximately a 0.27-percentage-point increase in same-year newcomer turnover. Hypothesis 1 was supported.

Model 3 shows that newcomer influx remained positive and significant ($b = 0.280$, $SE = 0.107$, $p = 0.009$). More importantly, the interaction between within-firm newcomer influx and within-firm entry-level benefits was negative and statistically significant ($b = -0.319$, $SE = 0.157$, 95% CI [-0.628, -0.011], $p = 0.043$). The main effect of entry-level benefits was not significant ($b = 1.229$, $SE = 1.331$, $p = 0.356$). These results are consistent with Hypothesis 2, although the interaction estimate is close to the conventional 0.05 threshold and is evaluated further in the sensitivity analyses below.

To facilitate interpretation of the interaction, we conducted simple-slope analyses. When entry-level benefits were one within-firm standard deviation below the firm's typical level, the newcomer-influx slope was 0.428 (95% CI [0.173, 0.683], $p = 0.001$). At the firm's typical benefits level, the slope was .280 (95% CI [0.071, 0.490], $p = 0.009$). When entry-level benefits were one within-firm standard deviation above the firm's typical level, the slope was .133 (95% CI [-0.119, 0.385], $p = 0.300$). The final estimate should not be interpreted as evidence that higher benefits eliminate the influx-turnover association; rather, its confidence interval indicates greater uncertainty around the weaker estimated slope.

Table 2. Fixed-effects regression results predicting early newcomer turnover

Variables	Model 1	Model 2	Model 3
Firm fixed effects	Included	Included	Included
Year fixed effects	Included	Included	Included
Firm size (ln)	9.125* (4.041)	8.633* (4.131)	9.122* (4.151)
Newcomer salary	0.018 (0.182)	0.001 (0.182)	0.007 (0.182)
Newcomer OJT	-3.395 (2.485)	-3.930 (2.467)	-3.973 (2.480)
Training investment per employee (ln)	2.920 (4.247)	2.953 (4.222)	3.061 (4.231)
Newcomer influx		0.273* (0.107)	0.280** (0.107)
Entry-level benefits			1.229 (1.331)
Newcomer influx × Entry-level benefits			-0.319* (0.157)
Observations	2,039	2,039	2,039
Firms	510	510	510
R^2	0.437	0.442	0.444

*Note: Unstandardized coefficients are reported; standard errors appear in parentheses. In Model 3, newcomer influx and entry-level benefits are expressed as firm-mean deviations for the interaction test. *p < 0.05. **p < 0.01. ***p < 0.001.*

Figure 1 illustrates the interaction using the three simple slopes and their 95% confidence intervals. The estimated slope relating newcomer influx to early newcomer turnover is steepest when entry-level benefits are relatively low, becomes more moderate at the firm's typical benefits level, and is flatter when benefits are relatively high. The intervals also show that the precision of the estimated slope decreases at the higher-benefits condition. The horizontal axis is the within-firm deviation in newcomer influx, with zero denoting each firm's own mean; the plotted change in predicted turnover is normalized to zero at that reference point. The three lines represent benefits deviations of −1 within-firm SD, zero (the firm-specific mean), and +1 within-firm SD. Shaded 95% confidence bands show uncertainty in the change from the zero-influx-deviation reference, based on the estimated simple slopes; they are not confidence intervals for absolute turnover levels.

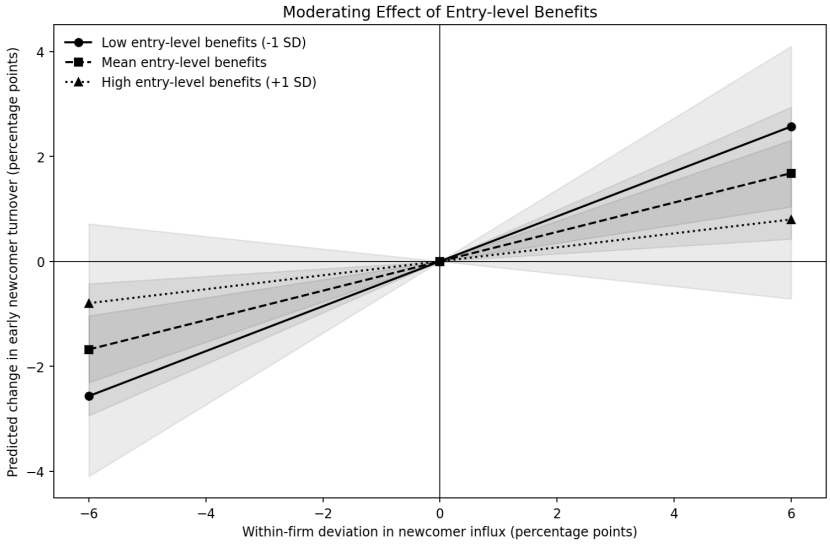

Figure 1. Moderating effect of entry-level benefits on the relationship between newcomer influx and early newcomer turnover, with 95% confidence intervals

Note. The plotted outcome is the predicted change in turnover (percentage points) relative to zero within-firm influx deviation; bands represent 95% confidence intervals for this change.

4.3. Robustness analyses

We conducted supplementary analyses addressing extreme influx values,

unequal newcomer-cohort sizes, mathematical coupling between the focal ratios, the bounded dependent variable, alternative coding of entry-level benefits, and selected time-varying confounders. These analyses are treated as sensitivity checks rather than as stronger causal identification strategies. Detailed specification-level estimates and sample counts are reported in **Supplementary Table S1**.

First, because newcomer influx was highly right-skewed, we examined whether extreme influx values drove the results. Excluding the observation in which newcomer influx exceeded 100% left both the positive influx association ($b = 0.298$, $p = 0.015$) and the negative influx × benefits interaction ($b = -0.322$, $p = 0.041$) statistically significant. Winsorizing influx at the 1st and 99th percentiles produced a similar pattern (influx: $b = 0.310$, $p = 0.010$; interaction: $b = -0.389$, $p = 0.034$). Weighting observations by the square root of newcomer hires yielded $b = 0.310$ ($p = 0.035$) for influx and $b = -0.319$ ($p < 0.001$) for the interaction; weighting directly by newcomer hires yielded $b = 0.372$ ($p = 0.033$) and $b = -0.312$ ($p < 0.001$), respectively.

Second, the median newcomer cohort contained 18 hires; 278 firm-years had fewer than five hires and 617 had fewer than ten. Re-estimating the linear fixed-effects model after requiring at least 3, 5, 10, or 20 hires, and reapplying the repeated-observation criterion, left the interaction negative in every specification, with p-values of 0.036, 0.044, 0.005, and 0.060, respectively. Thus, the negative interaction was not confined to the smallest newcomer cohorts, although statistical precision weakened under the most restrictive cutoff.

Third, we estimated firm fixed-effects PPML models of newcomer departure counts with log newcomer hires as an offset. This count-based specification avoids using the turnover percentage as the dependent variable and directly incorporates cohort size as exposure. The influx coefficient was positive ($b = 0.006878$, $p = 0.036$) and the influx × benefits interaction was negative ($b = -0.005912$, $p = 0.001$). When the coefficient on log hires was estimated freely rather than fixed at one, the interaction remained negative ($b = -0.005919$, $p = 0.001$), whereas the influx main effect was not significant ($p = 0.118$). The conditional firm-fixed-effects PPML estimation used 1,998 firm-years from 496 firms. Relative to the 2,039 observations and 510 firms in the linear FE sample, it excluded 41 firm-years from 14 firms with zero newcomer departures in every observed year; these all-zero outcome groups do not contribute to the conditional fixed-effects Poisson likelihood. This exclusion was checked against the reconstructed analysis sample and conditional count-model specification. In the baseline linear model, 29 fitted values (1.42%) fell outside the 0-100 range. PPML provides a useful alternative conditional-mean specification but does not itself impose the upper bound that departures cannot exceed hires. Fourth, we examined the ordinal treatment of entry-level benefits using five-category indicators and a three-category coding (below industry average, industry average, and above industry average). Using firm-mean-centered category indicators interacted with firm-mean-centered influx, the joint interaction tests were not statistically significant in the corresponding linear fixed-effects models (five categories: $p = 0.212$; three categories: $p = 0.084$), whereas they were significant in the departure-count PPML models (both $p < 0.001$). We therefore do not treat the categorical checks as an exact replication of the focal continuous within-firm estimand; rather, they indicate that the strength of moderation evidence is sensitive to functional form and estimator. Finally, the export-sales measure is a six-category ordinal variable, not a continuous percentage. Including its five category indicators yielded an interaction estimate of -.319 ($p = 0.048$); treating the six ordered codes as a linear score yielded -0.310 ($p = 0.054$). Allowing industry-specific year effects yielded -0.305 ($p = 0.058$), compared with -0.319 in the baseline model. The negative direction was consistent, but statistical significance varied across specifications. These checks do not eliminate residual

time-varying confounding. A leave-one-firm-out analysis, re-estimating the model after excluding each of the 510 firms in turn, produced negative interaction estimates throughout (approximately -0.351 to -0.274), but 25 of 510 exclusions yielded p-values at or above 0.05 (maximum approximately 0.159). Thus, the sign of the association was stable, whereas its conventional statistical significance was sensitive to the inclusion of some firms. Taken together, the supplementary analyses suggest a recurring negative moderation pattern but also reveal meaningful sensitivity in its statistical precision; they do not establish a uniformly robust effect.

5. Discussion

This study examined whether the relative scale of newcomer entry constitutes a retention-relevant organizational condition and whether entry-level benefits are associated with a weaker influx-turnover relationship. Across five waves of HCCP II data, firms experienced greater same-year newcomer turnover during periods in which newcomer influx was higher relative to their own levels in other observed years. Moreover, the positive association between newcomer influx and early turnover was weaker when entry-level benefits were simultaneously more favorable than the firm's typical level. The count-based and other sensitivity analyses generally preserved the negative moderation pattern, although its statistical precision varied across specifications. The findings should therefore be read as contemporaneous within-firm associations rather than evidence of causal effects.

5.1. Theoretical implications

First, the findings connect human capital flow research with newcomer retention research. Collective-turnover and human-capital-flow perspectives have increasingly treated employee movement as a dynamic organizational phenomenon involving both depletion and acquisition (Hausknecht & Trevor, 2011; Nyberg & Ployhart, 2013; Reilly et al., 2014). Research on human capital acquisition further demonstrates that the magnitude and timing of hiring affect organizational outcomes such as innovation (Wang & Zatzick, 2019). Our findings direct attention to a different consequence of those inflows: whether organizations retain the employees who constitute them. This perspective complements decades of newcomer research emphasizing individual adjustment, socialization tactics, information seeking, fit, support, and embeddedness (Bauer et al., 2007; Jones, 1986; Kammeyer-Mueller & Wanberg, 2003; Mitchell et al., 2001; Morrison, 1993; Van Maanen & Schein, 1979). The present findings suggest that these newcomer processes occur within a broader organizational inflow context. Entering an organization during a relatively low-influx period may constitute a different adjustment context from entering the same organization when substantially more newcomers must be accommodated.

Second, the results are consistent with a capacity-based interpretation of newcomer entry. Penrosean theory emphasizes limits on the rate at which organizations can effectively expand because managerial and organizational capacities cannot adjust instantaneously (Penrose, 1959). Recent evidence on workforce growth similarly suggests that rapid expansion may generate socio-structural challenges (Bort et al., 2025). Our findings indicate that a related logic may be relevant to gross newcomer entry, even when such entry does not translate directly into equivalent net employment growth. This distinction matters because employee inflow is not synonymous with employment growth. Firms can hire and lose employees simultaneously (Burgess et al., 2000, 2001). A firm may therefore experience substantial newcomer-absorption demands without experiencing large net growth. Newcomer influx directs attention toward this gross entry process. At the same time, we do not directly observe managerial capacity, supervisory attention, socialization quality, or resource dilution. The findings are therefore consistent with, rather than definitive evidence for, a capacity mechanism. Future research should directly examine these mediating mechanisms.

Third, the findings extend research on organizational inducements and retention. Longstanding research demonstrates that HR systems, exchange relationships, wages, and benefits influence employee turnover (Dale-Olsen, 2006; Huselid, 1995; Lee et al., 2006; Shaw et al., 2009). Our results suggest that the retention relevance of entry-level benefits may be contingent rather than uniform. At a firm's typical level of newcomer influx (a within-firm influx deviation of zero), the conditional association between entry-level benefits and turnover was not statistically significant ($b = 1.229$, $SE = 1.331$, $p = 0.356$). The benefits coefficient should not be interpreted as an unconditional association; the estimated relationship depends on the level of newcomer influx through the interaction term. This finding is consistent with retention theories emphasizing the value employees sacrifice by leaving (Mitchell et al., 2001). For newcomers, who have had relatively little time to accumulate social links and organizational tenure, tangible organizational inducements may constitute an important source of membership value. Our findings suggest that such inducements may become especially consequential during periods when organizations are simultaneously absorbing relatively large newcomer inflows.

5.2. Practical implications

Organizations planning substantial recruitment may wish to consider recruitment volume together with post-entry retention conditions. At the firm's typical entry-level benefits, a ten-percentage-point increase in newcomer influx was associated with approximately a 2.8-percentage-point increase in same-year newcomer turnover. This association does not imply that firms should reduce hiring: large-scale recruitment may reflect growth, replacement needs, new projects, or changing skill demands, and the present data cannot distinguish these motives. Rather, periods of unusually high newcomer influx can be treated as periods in which retention conditions merit additional managerial attention.

The moderation results likewise should not be interpreted as evidence that increasing benefits will necessarily reduce turnover. The analysis shows that the positive influx-turnover association was weaker in years when a firm's entry-level benefits were more favorable than its own typical level. This pattern identifies a potentially relevant retention condition, not a tested managerial intervention or an optimal benefits level. Benefits also should not be treated as a substitute for effective onboarding, socialization, training, or supervisor support, none of which was directly tested as a mechanism in this study.

5.3. Limitations and future research

Several limitations qualify our conclusions. First, the measures of newcomer hiring and departure refer to the same calendar year. Turnover may therefore induce replacement hiring, and the data do not allow us to establish temporal ordering within the newcomer cohort. A lagged specification using the available annual measures would link different entering cohorts rather than follow the same hires over time. The results should consequently be interpreted as contemporaneous within-firm associations, not causal effects. Time-varying omitted variables—including restructuring, firm performance, industry-specific labor demand, regional labor-market conditions, and changes in hiring purpose—may also affect both influx and turnover. Ordinal export-category controls yielded a similar negative interaction, whereas a linear export-score control and industry-specific year effects produced p-values slightly above 0.05; residual confounding remains possible. Leave-one-firm-out estimates were uniformly negative, but 25 of 510 exclusions were not significant at the 0.05 level, underscoring the sensitivity of statistical precision to some firms. Second, early newcomer turnover is measured within the same calendar year rather than over an identical exposure period following entry. Individual hiring and departure dates are unavailable, and employees hired early in a year therefore have more opportunity to be observed leaving than

employees hired late in the year. Future research should use fixed post-entry windows. Third, although our theoretical reasoning discusses newcomer-absorption and integration demands, managerial capacity, supervisory attention, socialization quality, and resource dilution are not directly observed. These processes remain plausible mechanisms requiring direct tests. Fourth, entry-level benefits is a single firm-reported, industry-relative five-category item. Its numerical treatment imposes a linear-trend approximation, and categorical sensitivity analyses produced results that varied by estimator. In addition, for manufacturing firms the questionnaire asks about office/administrative employees, which may not perfectly match the employee coverage of the turnover measure. Fifth, the HCCP departure measure does not distinguish voluntary from involuntary turnover. The data therefore do not establish what share of observed newcomer departures was voluntary. Sixth, year fixed effects absorb common annual shocks but cannot fully capture heterogeneous COVID-19 effects, and only one reference year precedes the pandemic. Finally, the sample is restricted to Korean firms with at least 100 regular employees and at least one newcomer hire, limiting generalizability to smaller organizations and other institutional settings.

6. Conclusion

Successful human capital acquisition involves more than bringing new employees into an organization; it also requires retaining them after entry. In this study, firms experienced greater same-year newcomer turnover during periods in which newcomer entry was high relative to their existing workforce, and the positive association was weaker when entry-level benefits were more favorable than the firm's own typical level. Count-based and other sensitivity analyses generally preserved the negative moderation pattern, although its statistical precision varied across specifications. These results connect human capital inflows with newcomer retention while underscoring that the evidence is contemporaneous and within-firm rather than causal. The scale at which organizations acquire human capital may therefore be a useful retention-relevant context to consider alongside the conditions offered to newcomers, but the present findings do not identify a specific intervention that will necessarily reduce turnover.

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Ethical approval: This study used anonymized secondary firm-level data from the Human Capital Corporate Panel II (HCCP II) and involved no direct recruitment of or interaction with human participants. The HCCP is an official national statistical survey approved by Statistics Korea (Approval No. 389003) and is conducted by the Korea Research Institute for Vocational Education and Training (KRIVET) in cooperation with the Ministry of Employment and Labor. Therefore, no additional ethical approval was sought for the present secondary-data analysis.

Informed consent statement: Not applicable. This study involved secondary analysis of anonymized HCCP II data and did not involve direct recruitment of or interaction with human participants.

Data availability statement: The data supporting the findings of this study are available from the Human Capital Corporate Panel (HCCP), administered by the Korea Research Institute for Vocational Education and Training. HCCP data are provided to researchers through the official KRIVET data-access procedure, which requires submission of information including the purpose of data use and the relevant data-use and privacy agreements. The data can be accessed through the official HCCP data service, subject to KRIVET's terms and conditions.

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Appendix. Supplementary Table S1. Robustness and Sensitivity Analyses

Specification	Firm-years	Firms	Interaction b	SE / test	p-value
Baseline linear FE	2,039	510	-0.319	0.157	0.043
Exclude influx > 100%	2,038	510	-0.322	0.157	0.041
Winsorize influx (1st/99th)	2,039	510	-0.389	0.183	0.034
Weight: sqrt(new hires)	2,039	510	-0.319	0.072	< 0.001
Weight: new hires	2,039	510	-0.312	0.073	< 0.001
Minimum 3 hires	1,888	486	-0.310	0.147	0.036
Minimum 5 hires	1,723	460	-0.282	0.140	0.044
Minimum 10 hires	1,356	378	-0.358	0.126	0.005
Minimum 20 hires	874	258	-0.264	0.140	0.060
FE PPML, log hires offset	1,998	496	−0.005912	0.001851	0.001
FE PPML, log hires free	1,998	496	−0.005919	0.001832	0.001
Benefits: 5 categories, linear FE	2,039	510	Joint test	F test	0.212
Benefits: 3 categories, linear FE	2,039	510	Joint test	F test	0.084
Benefits: 5 categories, FE PPML	1,998	496	Joint test	Wald test	< 0.001
Benefits: 3 categories, FE PPML	1,998	496	Joint test	Wald test	< 0.001
Export share: categorical control	2,039	510	−0.319	0.161	0.048
Export share: linear score	2,039	510	−0.310	0.160	0.054
Industry × year effects	2,039	510	−0.305	0.161	0.058

Note: FE = firm fixed effects; PPML = Poisson pseudo-maximum likelihood. Linear FE standard errors are firm-clustered. PPML and categorical estimates use different scales or joint interaction tests and should not be compared directly with the baseline linear interaction coefficient. The PPML models exclude 14 all-zero-departure firms (41 firm-years). All p-values are rounded to three decimals where applicable.